

# **EXHIBIT 14**

**THE ROLE AND PROCESS OF EXPOSURE ASSESSMENT  
REGARDING ASBESTOS-RELATED PERSONAL INJURY LIABILITY:  
REVISIONS TO SUPPLEMENTAL REPORT**

Report Prepared for

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**EXPOSURE ASSESSMENT REPORT SUPPLEMENT****JULY 31, 2007**

*Chrysotile Products*, exposures were  $0.3 \text{ f/cm}^3$  under the non-stratified method, as compared to  $0.2 \text{ f/cm}^3$  under the stratified method) and 37 of the exposures (86%) are identical. In overview, despite the potential biases associated with both averaging methods, it is concluded that neither method has a significant systematic bias which would cause one method to preferentially yield higher or lower values. That is to say, both averaging methods produce comparable estimates of exposure, indicating that the exposure estimates are robust, providing confidence that they are valid estimates of exposure. An additional analysis to detect outlier values in the data that could potentially skew the calculated means was conducted. The Grubb's Test for Outliers<sup>(12)</sup> was performed on the data making up each Product Category/Nature of Exposure Category grouping. Only one outlier point was detected in all of the exposure groupings: a single extreme value ( $0.106 \text{ f/cm}^3$ ) in the *Vermiculite Used Dry (post-construction)/Category D* grouping. Although this value may have skewed the average upward in this category, the data point was not excluded from analyses.

**Calculation of concentrations for samples <LOD**

In conforming with long-standing industrial hygiene practice cited in my previous work, the airborne fiber concentration for samples in which no fibers were detected was assigned a value of  $\frac{1}{2}$  the LOD, i.e.,  $\frac{1}{2}$  fiber, in order to calculate summary exposure statistics. This method of dealing with samples below the LOD has been widely accepted and used for at least the last 25 years in the industrial hygiene profession. At least three recent publications<sup>(13-15)</sup>, including one by the US EPA,<sup>(13)</sup> have substituted a value of 0 fiber to calculate summary exposure statistics for samples below the LOD. The substitution of 0 fiber instead of  $\frac{1}{2}$  fiber would have substantial effect on many of the reported exposure concentrations, reducing the calculated concentrations of approximately 16% of the samples (296/1818) in the vermiculite product categories and at least 1/4 of the 1575 samples in the combined product category. For the purpose of this report, however, I have retained the more conservative  $\frac{1}{2}$  fiber substitution for calculating fiber concentrations in samples below the LOD.

**Revised exposure summary tables**

Incorporation of several additional studies and finalized PCM/PCME adjustment factors resulted in changes to Tables 2 and 3 of my June 11, 2007 report. These changes are reflected in the updated Tables 2 and 3 in this report.

Tables 4 and 5 of this report summarize population exposures for use in the risk assessment that have been derived from use of the alternative method of determining means described above.

**Revised appendices**

The back-up data for all of the changes described above have been incorporated in revised Appendices C through L. The only substantive change to the appendices is the addition of a new table in each appendix which summarizes the non-stratified calculation of mean exposures for each product and product application category. Appendix M has been deleted as the preliminary data analysis presented has been finalized and is superseded by the Expert Report of RJ Lee dated July 31, 2007. Finally, a new Appendix N has been added to clarify the presentation of data used in the calculation of exposure concentrations for the *Combined (post-construction)* product category.

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**Table 2:** Summary of Mean 8-hour TWA Direct Exposures by "Nature of Exposure" Category using Stratified Averaging Method

Product Category	Category A (mixed)				Category B (removed or cut)				Category C (installed)			
	Mean PCM Exposure (f/cm <sup>3</sup> )	PCME Exposure (f/cm <sup>3</sup> )	N	% <LOD	Mean PCM Exposure (f/cm <sup>3</sup> )	PCME Exposure (f/cm <sup>3</sup> )	N	% <LOD	Mean PCM Exposure (f/cm <sup>3</sup> )	PCME Exposure (f/cm <sup>3</sup> )	N	% <LOD
<i>Vermiculite</i>												
Used Dry (construction)	NA		----	----	NA		----	----	0.157	0.0232	403	13
Used Dry (post-construction)	NA		----	----	0.319	0.0473	103	1	NA		----	----
Mixed Dry	0.367	0.0524	116	27	NA		----	----	0.004	0.0008	8	100
Mixed Wet & Sprayed	0.051	0.0076	126	32	NI		----	----	0.049	0.0072	112	24
Mixed Wet & Troweled	0.201	0.0298	457	16	NI		----	----	0.049	0.0073	213	14
<i>Vermiculite &amp; Chrysotile</i>												
Sprayed (construction) <sup>1</sup>	1.157	0.4233	20	0	NI		----	----	1.026	0.2257	27	0
Troweled	<1.157	<0.4233	----	----	NI		----	----	<1.026	<0.2257	----	----
Brushed/Painted	NA		----	----	NI		----	----	<1.026	<0.2257	----	----
<i>Chrysotile</i>												
Sprayed	<1.157	<0.4233	----	----	NI		----	----	<1.026	<0.2257	----	----
Troweled	<1.157	<0.4233	----	----	NI		----	----	<1.026	<0.2257	----	----
Brushed/Painted	NA		----	----	NI		----	----	<1.026	<0.2257	----	----
<i>Combined (post-construction)</i>	NA		----	----	0.027	0.0038	1575	11	NA		----	----

N - total number of samples

NA - Not Applicable

NI - No information at this time

11 - Insufficient Information at this time

1 - 1958-1973 only

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**Table 3:** Summary of Mean 8-hour TWA Indirect Exposures by "Nature of Exposure" Category using Stratified Averaging Method (cont.)

Product Category	Category D (worker at site with Category A, B, C)				Category E (worker in space with Category A, B, C)			
	Mean PCM Exposure (f/cm <sup>3</sup> )	PCME Exposure (f/cm <sup>3</sup> )	N	%<LOD	Mean PCM Exposure (f/cm <sup>3</sup> )	PCME Exposure (f/cm <sup>3</sup> )	N	%<LOD
<i>Vermiculite</i>								
Used Dry (construction)	0.018	0.0001	8	13	0.108	0.0037	1	0
Used Dry (post-construction)	0.014	0.0001	60	10	0.049	0.0020	110	2
Mixed Dry	0.016	0.0001	13	69	0.010	0.0003	3	100
Mixed Wet & Sprayed	0.021	0.0002	4	75	0.008	0.0006	8	25
Mixed Wet & Troweled	0.029	0.0002	9	67	0.037	0.0013	2	100
<i>Vermiculite &amp; Chrysotile</i>								
Sprayed (construction) <sup>1</sup>	0.091	0.0033	9	0	0.090	0.0034	6	0
Troweled	<0.091	<0.0033	----	----	<0.090	<0.0034	----	----
Brushed/Painted	<0.091	<0.0033	----	----	<0.090	<0.0034	----	----
<i>Chrysotile</i>								
Sprayed	<0.091	<0.0033	----	----	<0.090	<0.0034	----	----
Troweled	<0.091	<0.0033	----	----	<0.090	<0.0034	----	----
Brushed/Painted	<0.091	<0.0033	----	----	<0.090	<0.0034	----	----
<i>Combined (post-construction)</i>	<0.002	<0.0003	II	II	0.002	0.0003	92	II

N - total number of samples

NA - Not Applicable

NI - No information at this time

II - Insufficient Information at this time

1 - 1958-1973 only